

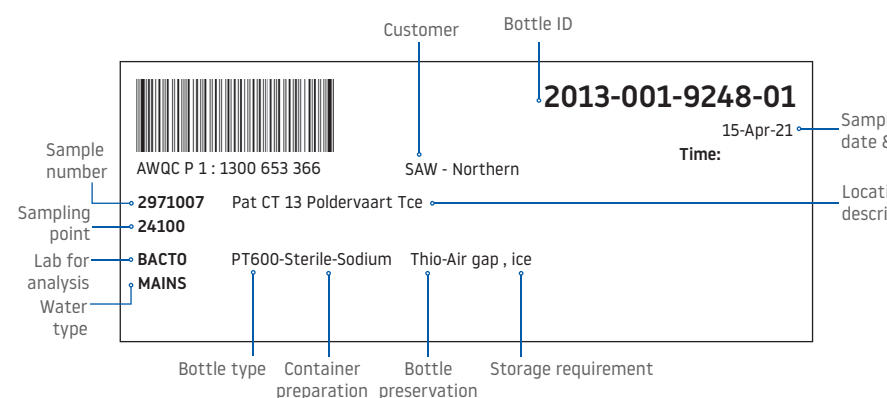
Sampling kit - containers and bottles

Fill all provided bottles for each sample point to ensure sufficient sample is collected. Some bottles have special preservatives added. It is important to collect samples correctly using the sampling containers we provide. Other containers can affect the validity of scientific test results. Fill the bottles according to the requirements shown for the analytes over the page.

Collect and submit samples

Follow the sampling instructions and collect the sample in bottles provided – note holding times for specific analyses. Deliver as soon as possible to our Adelaide laboratory. Samples for bacteriological testing i.e. *E. coli*, must be delivered within 24 hours of collection. Fill in the chain of custody form clearly and accurately including date and time of sampling (otherwise your order may be rejected). Place samples in esky with ice brick (excluding Amoeba) ready for transportation. Do not freeze the samples. Keep samples clean and upright to prevent leakage, and protect them from excessive heat, cold or physical damage.

Sample bottle label information



Secure esky lids so they do not come loose in transit. Some eskies may need to be sealed with packing tape. Paperwork packed within the transport container should be sealed in a plastic bag to prevent water damage.

Holding times and standards

Holding times are based on best practice (including legislative requirements) to allow for the analysis to be carried out properly and with assurance. Submit samples to the laboratory well within the holding time to ensure compliance. Samples that exceed the maximum holding times are usually deemed unsuitable for testing.

Quality control

Our quality control (QC) program includes a range of different checks at regular intervals that are method specific and comprise blanks, checks, secondary reference materials, certified reference materials, spikes, analytical quality control samples, replicate analysis and duplicates.

Sampling tips

- Ensure the sample is representative of the source and always collect from the same location.
- If sampling from a tap, minimum flush of 2 minutes prior to collection (unless specified otherwise).
- Collection of microbiological samples should be immediately after sample point disinfection.
- All microbiological samples should be double bagged with zip locks for transportation to AWQC.
- Sample bottles should be adequately filled. If an air gap is required, fill to base of neck.
- Ensure all sample bottles are labelled. If you are not using an AWQC label, provide sample location description and time/date collected as a minimum.

Field filtering directions

- Avoid contamination by not touching tips of filters and syringe internals.
- Pre-rinse syringe with sample water.
- Add 50-60ml of sample, invert and expel air.
- Screw on a white GF filter first, followed by 0.45µm yellow filter.
- Samples low in suspended material can be filtered with only a 0.45µm yellow filter.
- Commence filtering until sample is dispensed or filters are blocked. Replace filters if necessary.

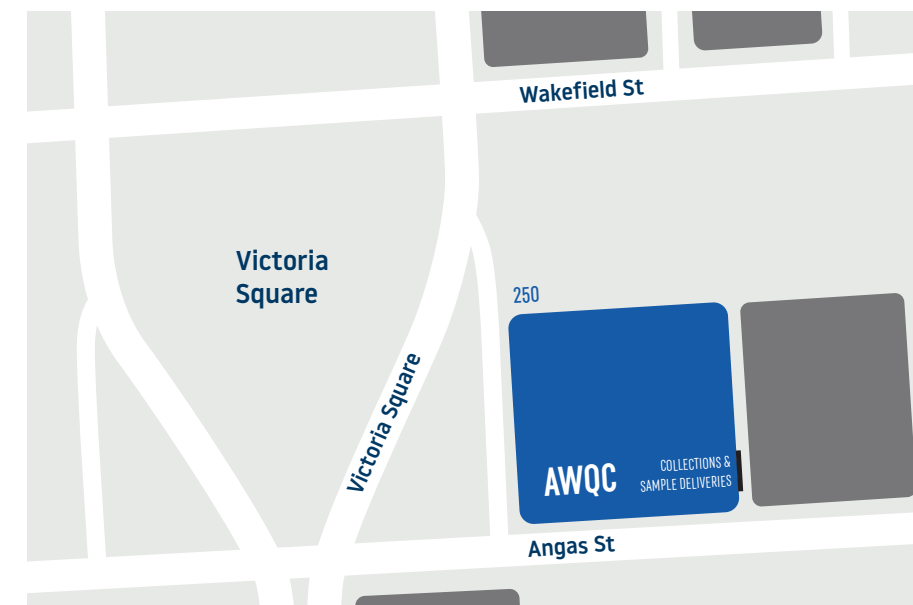
- Samples should be immediately chilled, preferably use ice. In the case of ice bricks, please attempt to pre-chill samples prior to transport to AWQC with ice bricks.
- Samples for Amoeba analysis must NOT be chilled or placed on ice.
- Pre-dosed bottles must never be rinsed.
- Surface sampling should always occur, if possible, at a minimum of 30cm below the surface to avoid any surface scums.

- Ensure a minimum of 60ml is collected.
- DO NOT completely fill container, an air gap is required for sample freezing at AWQC.
- Discard filters after use.
- NOTE: when collecting a filtered and unfiltered sample from the same location, filter water from the unfiltered container to ensure the samples are comparable with each other.

GI-150 SAMPLE BOTTLE GUIDE						Biological Analyses			Microbiological Analyses							Molecular Analyses	
GENERAL	RADIOACTIVITY	HEAVY METALS	NUTRIENTS - TOTAL	NUTRIENTS - TOTAL	NUTRIENTS - FILTERABLE	ALGAL	CHLOROPHYLL	ODOURS	GENERAL	LEGIONELLA	SULPHITE & SULPHATE REDUCING BACTERIA	CAMPYLOBACTERIA & SALMONELLA	ICE	AMOEBAE	CRYPTOSPORIDIUM & GIARDIA	OVA/HELMINTH	E. COLI PHYLOGROUPING
Sample container 250ml Plastic (PT250) 	Sample container 1L HDPE (HDPE) 100mL Amber Glass (GLBB) 	Sample container 250mL HDPE (HDPE1) 	Sample container 250mL Plastic (PT250) 	Sample container 120mL Plastic (PT120) 	Sample container 120mL Plastic (PT120) 	Sample container 250mL Plastic (PT250) 	Sample container 1L Black Plastic (BLKPT1) 	Sample container 355mL Plastic (PT355) 	Sample container 300mL Sterile Plastic (PT300) 	Sample container 300mL Sterile Plastic (PT300) 	Sample container 300mL Sterile Plastic (PT300) 	Sample container 2 x 600mL Sterile Plastic (PT600) 	Sample container Plastic Pot (PT600) 	Sample container 600mL Sterile Plastic (PT600) 	Sample container 2 x 10L Plastic (JC1) 	Sample container 2 x 1.25L DNA free (PT1250) 	Sample container 300mL Sterile Plastic (PT300)
Label PT250 - none, none - no air gap, ice	Label HDPE - none, none - no air gap, ice GLBB - none, none - no air gap, ice	Label HDPE1 - RO rinsed, none - no air gap, ice	Label PT250 - none, none - no air gap, ice	Label PT120 - none, none - air gap, ice	Label PT120 - none, none - filtered - air gap, ice	Label PT250 - none, none - air gap, ice	Label BLKPT1 - none, none - air gap, ice	Label PT355 - none, none - air gap, ice	Label PT300 - sterile, Sodium Thio - air gap, ice	Label PT300 - sterile, Sodium Thio - air gap, ice	Label PT300 - sterile, Sodium Thio - no air gap, ice	Label PT600 - sterile, Sodium Thio - air gap, ice	Label PT600 - sterile, Sodium Thio - air gap, ice	Label PT600 - sterile, Sodium Thio - air gap, no ice	Label JC1 - sterile, Sodium Thio - air gap, ice	Label PT1250 - sterile, Sodium Thio - air gap, no ice	Label PT300 - sterile, Sodium Thio - air gap, ice
Analytes and holding times All water types **pH (6 hours) *Conductivity (28 days) *Colour (48 hours) *Turbidity (24 hours) *Alkalinity (24 hours)	Analytes and holding times All water types **Gross Alpha & Beta (28 days) **Radon 222 (96 hours)	Analytes and holding times All water types **All Metals (28 days) Includes cations calcium, magnesium, sodium and potassium	Analytes and holding times All water types *Chloride (28 days) *Fluoride (28 days) *OXN/Nitrite (24 hours) *Ammonia (6 hours) *Filterable P (24 hours)	Analytes and holding times All water types *TKN (28 days once frozen at AWQC) *Total P (28 days)	Analytes and holding times All water types *SKN (28 days/48 hours once frozen at AWQC) *Soluble P (28 days/48 hours once frozen at AWQC) *Ammonia (28 days/48 hours once frozen at AWQC) *OXN/Filterable P (28 days/48 hours once frozen at AWQC) *Nitrite (48 hours)	Analytes and holding times All water types Including cyanobacteria, see preservation below (24 hours for live samples)	Analytes and holding times All water types *Chlorophyll (48 hours)	Analytes and holding times All water types *Odour test (24 hours)	Analytes and holding times All water types *E. coli (24 hours) *Thermotolerant coliforms (24 hours) *Enterococcus (24 hours) *Iron bacteria (24 hours) *Pseudomonas (24 hours) *Plate counts (24 hours) *Bacteriophages and rRNA phage (24 hours)	Analytes and holding times All water types *Legionella (24 hours) Samples from warm or hot water systems require NO FLUSHING or flame sterilisation of sample tap prior to sampling	Analytes and holding times All water types *Spore of sulphite reducing Clostridia including <i>Clostridium perfringens</i> (24 hours) *Sulphate Reducing Bacteria (24 hours)	Analytes and holding times All water types *Campylobacter (<i>C. jejuni</i> , <i>C. coli</i>) (24 hours) *Salmonella spp. (24 hours)	Analytes and holding times All water types *E. coli (24 hours) *Coliforms (24 hours) *Legionella (24 hours)	Analytes and holding times All water types ***Amoebae – <i>Naegleria fowleri</i> (96 hours as per in-house validation) Amoebae samples are not to be chilled	Analytes and holding times All water types <i>Cryptosporidium</i> and <i>Giardia</i> (96 hours as per USEPA 1623)	Analytes and holding times <i>Cryptosporidium</i> and <i>Giardia</i> (96 hours as per USEPA 1623)	Analytes and holding times All water types 72 hours Emergency 48 hours
Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements No air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap
Storage and preservation Ice or chilled to 4°C No preservation	Storage and preservation Ice or chilled to 4°C No preservation	Storage and preservation Ice or chilled to 4°C No preservation	Storage and preservation Ice or chilled to 4°C No preservation	Storage and preservation Ice or chilled to 4°C No preservation	Storage and preservation Ice or chilled to 4°C No preservation	Storage and preservation Ice or chilled to 4°C (live) Algae holding time increased to 28 days when preserved with Lugol's solution: • Freshwater samples 1:100 by volume • Marine samples: 1:200 by volume	Storage and preservation Ice or chilled to 4°C No preservation	Storage and preservation Ice or chilled to 4°C No preservation	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed
Notes No container preparation.	Notes No container preparation.	Notes Container is pre-rinsed with RO water.	Notes No container preparation.	Notes No container preparation.	Notes Filtration equipment is required to filter the sample in the field.	Notes No container preparation.	Notes No container preparation.	Notes No container preparation.	Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice.	Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice.	Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice.	Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice.	Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice.	Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice.	Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice.	Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice.	Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice or chilled.

*Holding times as per Standard Methods, 22nd Edition, 2012 **Holding times as per AS/NZS5667.1:1998 ***No stated holding time in Standard Methods or AS/NZS5667, deliver to lab As Soon As Possible (ASAP) or as stated.

Laboratory location



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 Angas Street entry
 250 Victoria Square/Tarntanyangga, Adelaide, SA 5000

Phone: 1300 653 366
 Email: customerservice@awqc.com.au
 Website: www.awqc.com.au

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GI-150 SAMPLE BOTTLE GUIDE					Chemical Analysis - Organic					Wastewater										
Molecular Analyses					Chemical Analysis - Organic					Wastewater										
<i>E. COLI</i> CAPSULE	FAECAL SOURCE TRACKING (FST)	NGS ANALYSES (bdNA/vDNA)	<i>E. COLI</i> WHOLE GENOME SEQUENCING (WGS)	CYANODTec	VFA	NDMA	VOC/BTEX	GENERAL	ALGAL TOXINS	DOC, TOC, MIB, GEOSMIN, TCA, HAAFP, THMFP, GLYPHOSATE	DISINFECTION BYPRODUCTS	<i>GIARDIA</i> & <i>CRYPTOSPORIDIUM</i> (WASTEWATER ONLY)	GENERAL & BOD	CYANIDE	TRANSMITTANCE/ABSORBANCE	GREASE	SLUDGES, SOLIDS & SOILS	SLUDGE & SEDIMENTS (MICROBIOLOGICAL ANALYSES)	<i>GIARDIA</i> & <i>CRYPTOSPORIDIUM</i> (WASTEWATER ONLY)	
Sample container 300mL Sterile Plastic (PT300) 	Sample container 1.25L DNA free Plastic 	Sample container 1.25L DNA free 	Sample container 300mL Sterile Plastic (PT300) 	Sample container 300mL Sterile Plastic (PT300) 	Sample container 120mL Plastic (PT120) 	Sample container 1L Black Plastic (APT) 	Sample container 2 x 40mL Amber Glass (AG40) 	Sample container 1L Glass (GL1000) 	Sample container 600mL or 1.25L Plastic (PT600 or PT1250) 	Sample container 355mL Plastic (PT355) 	Sample container 250mL Plastic or 355mL Plastic (PT250 or PT355) 	Sample container 2 x 1.25L Plastic (PT1250) 	Sample container Plastic (size dependent on test numbers) 	Sample container 100mL Plastic HDPE (HDPE100) 	Sample container 250mL Plastic (PT250) 	Sample container 1L Glass (GL1000) 	Sample container 500mL Plastic Pot (PP500) 	Sample container Plastic Pit (PT600) 	Sample container 2 x 1.25L Plastic (PT1250) 	
Label PT300 - sterile, Sodium Thio - air gap	Label PTDNA - bacto, none, sterile - air gap	Label PTDNA - bacto, none, sterile - air gap	Label PT300 - sterile, Sodium Thio - air gap	Label PT300 - sterile, Sodium Thio - air gap	Label PT120 - none, none - air gap, ice	Label APT - 1000, none - Sodium Thio - no air gap, ice	Label AG40 - none, none - no air gap, ice	Label GL1000 - none, none - no air gap, ice	Label PT600 or 1250 - none, none - no air gap, ice	Label PT355 - none, none - no air gap, ice	Label PT250 or PT355 - none, Ammonium Chloride - no air gap, ice	Label PT1250 - sterile, Sodium Thio - air gap, ice	Label PT - none, none - no air gap, ice	Label HDPE100 - none, NaOH - no air gap, ice	Label PT250 - none, none - no air gap, ice	Label GL1000 - acid washed, none - no air gap, ice	Label PP500 - none, none - none	Label PT600 - sterile, Sodium Thio - air gap, no ice	Label PT1250 - sterile, Sodium Thio - air gap, no ice	
Analytes and holding times All water types 72 hours Emergency 48 hours	Analytes and holding times All water types 72 hours Emergency 2 days	Analytes and holding times All water types 72 hours	Analytes and holding times All water types 72 hours	Analytes and holding times All water types 72 hours Emergency 48 hours	Analytes and holding times All water types ***VFA (ASAP)	Analytes and holding times ***NDMA (ASAP)	Analytes and holding times ***VOC/BTEX (ASAP) ***Acid herbicides / Haloxyfop (ASAP)	Analytes and holding times All water types ***Organochlorides (ASAP) ***Organophosphates (ASAP) ***Acid herbicides (ASAP) ***DBP_551 (ASAP) ***GCMSSCANS (ASAP) ***VOC, BTEX, Haloxyfop (ASAP) ***Formaldehyde ***TPH/TRH (ASAP)	Analytes and holding times All water types ***Algal Toxins (ASAP) PT1250 bottle Microcystins Nodularin PT600 bottle Paralytic Shellfish Poison (PSP) Cylindrospermopsin Deoxyxylindrospermopsin Anatoxin	Analytes and holding times All water types ***Dissolved Organic Carbon ***Total Organic Carbon (ASAP) ***Total Carbon (ASAP) ***MIB, Geosmin, TCA (ASAP) ***Glyphosate (ASAP) ***Formation Potential of THM and HAA (ASAP)	Analytes and holding times All water types ***Haloacetic Acids (ASAP) ***Chloroacetic Acids (ASAP) ***DBP_551 (ASAP) ***THM (ASAP) ***VCH (ASAP)	Analytes and holding times All water types All water types <i>Cryptosporidium</i> and <i>Giardia</i> (48 hours as per USEPA 1623)	Analytes and holding times All water types *Biochemical Oxygen Demand (48 hours) *Solids - suspended or dissolved (7 days) *Chemical Oxygen Demand (28 days) *pH (6 hours) *Conductivity (28 days)	Analytes and holding times All water types *Cyanide (14 days)	Analytes and holding times All water types *UV Transmittance (3 days) *UV Absorbance (3 days)	Analytes and holding times All water types *Grease (28 days)	Analytes and holding times All water types No preservative	Analytes and holding times All water types * <i>E. coli</i> (24 hours) *Coliforms (24 hours) Filamentous bacteria Amoebae - <i>Naegleria fowleri</i> (48 hours as per inhouse valid)	Analytes and holding times <i>Cryptosporidium</i> and <i>Giardia</i> (96 hours as per USEPA 1623)	
Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements Air gap	Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements Air gap	Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements No air gap	Sampling requirements Air gap	Sampling requirements Air gap	
Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C 1.25L DNA free	Storage and preservation Ice or chilled to 4°C 1.25L DNA free	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C No preservative	Storage and preservation Ice or chilled to 4°C 150mg/L Sodium Sulphite or Chloramine <4.0mg/L	Storage and preservation Ice or chilled to 4°C No preservative	Storage and preservation Ice or chilled to 4°C No preservative	Storage and preservation Ice or chilled to 4°C No preservative	Storage and preservation Ice or chilled to 4°C No preservative	Storage and preservation Ice or chilled to 4°C 100mg/L Ammonium Chloride Dosed	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C No preservative	Storage and preservation Ice or chilled to 4°C NaOH pellet dosed	Storage and preservation Ice or chilled to 4°C No preservative	Storage and preservation Ice or chilled to 4°C No preservative	Storage and preservation No preservative	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	Storage and preservation Ice or chilled to 4°C Sodium thiosulphate dosed	
Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice or chilled.	Notes Sampler must follow DNA sampling procedure WI-375. Containers to be double bagged using zip lock bags for storage on ice or chilled.	Notes Sampler must follow DNA sampling procedure WI-375. Containers to be double bagged using zip lock bags for storage on ice or chilled.	Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice or chilled.	Notes No container preparation.	Notes No container preparation.	Notes Wrap entire bottle in foil if amber glass bottles or black plastic bottles are not used.	Notes No container preparation.	Notes No container preparation. Amber glass bottle can also be used.	Notes No container preparation.	Notes No container preparation.	Notes No container preparation.	Notes Single analysis 250mL bottle is sufficient for ≥ 2 analyses 355mL bottle required.	Notes Samples to be taken in pre-dosed container. Do not rinse. Fill initially with small air gap, invert to mix pellets, squeeze out remaining air.	Notes No container preparation.	Notes Samples to be taken in pre-dosed container. Do not rinse. Invert to mix pellets.	Notes No container preparation.	Notes No container preparation.	Notes Take care not to overfill container. Containers to be double bagged using zip lock bags.	Notes Aseptic preparation is mandatory. Containers to be double bagged using zip lock bags for storage on ice or chilled.	Notes Aseptic preparation is mandatory. 2 x 1.25L Pet Bottles to be used.

*Holding times as per Standard Methods, 22nd Edition, 2012 **Holding times as per AS/NZS5667.1:1998 ***No stated holding time in Standard Methods or AS/NZS5667, deliver to lab As Soon As Possible (ASAP) or as stated.



SAMPLE BOTTLE COLLECTION GUIDE

July 2023



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